

A STUDY ON PERCEPTION OF INDIAN MARINERS WORKING IN OIL TANKER SHIPS TOWARDS THE WORKWEAR

RADHIKA. N¹ & G. BAGYALAKSHMI²

¹Assistant Professor, Department of Costume Design and Fashion, Kongu Arts and Science College,
Erode, Tamil Nadu, India

²Assistant Professor (SS), Department of Textiles and Clothing, Avinashilingam Institute for Home
Science and Higher Education for Women, Coimbatore, Tamil Nadu, India

ABSTRACT

In this proposed research study, an attempt has been made to enhance the functional aspects of Workwear of the Indian Marine Engineers working in oil tanker ships and who are professionals responsible for the operation, maintenance and repair of all major mechanical and engineered equipments onboard a ship. People involved in various defence organisations expect safety clothing along with care and comfort properties to protect themselves from various employment hazards. Technical Textiles are manufactured primarily for their technical performance and functional properties and their contribution in the defence textiles is becoming the need of the hour. This study aimed at conducting a survey through questionnaire method among the Indian Marine Engineers working in oil tanker ships to receive personalized feedback of their Workwear which are known as Boilersuits/Overalls.

KEYWORDS: Mariners, Oil Tanker Ships, Boilersuits, Survey, Perception, Care and Comfort Properties

INTRODUCTION

The world market of textiles are becoming highly competitive as consumers demand more textile products with higher performance and multi-functional behaviour and it is a very great challenge for the textile manufacturers to produce such garments.

Protective clothing's are now a major part of textiles classified as Technical textiles or Industrial textiles. Protective clothing refers to the garments and other fabric related items, designed to protect wearer from harsh environmental effects that may result in injuries or death (Adanur 1995). The primary areas of protection under all environmental conditions include ballistics, chemical/biological, detection through odour, noise and visual enhancing devices, flame and thermal, insects and micro-organisms. In addition to protection, the gear must have properties for high resistance to sun, resist mildew, withstand static propensity in numerous applications, water repellancy, excellent durability to resist abrasion, tears and breaks, air permeability requirements according to the end use and for some military applications, resistant to petroleum, oil and lubricants (Gudhka et al. 2010). No one can predict the exact time of when did man became aware of safety and protection, but one disputable fact is that he has already taken efforts to protect himself from various vulnerabilities and he has been constantly making efforts to safeguard himself. There is no one best solution for all situations; rather selection of these apparels should be based both on risk assessment and an evaluation of the workers' specific tasks and work environments (Sakthivel et al. 2012).

An attempt to take a step in this direction, the present study was undertaken to collect the data regarding the durability and comfortability of the Workwear of Indian Marine Engineers working in oil tanker ships. Also the perception of the respondents while or after laundering their Workwear was analysed.

METHODOLOGY

For the current study, the sample of respondents was selected through random sampling technique. The sample size for this study comprised of 100 Indian Marine Engineers who have been working in oil tanker ships besides working in other shipping Carriers or Vessels. A questionnaire was framed to elicit data concerning the comfort properties of Marine Engineers' Workwear. Prior to that, a pre-testing was carried out on a smaller sample of Marine Engineers working in oil tanker ships through telephone interview method. Necessary alterations were brought in the questionnaire after pre-testing. Questionnaire was distributed among the respondents during their leisure time. The data thus collected through the questionnaire were coded, tabulated, interpreted and analysed using the statistical tools.

FINDINGS

The survey results of the perception of Indian Mariners working in Oil tanker ships towards the Workwear are outlined and summarised as given below;

Considering the type of Workwear, the Indian Mariners use while working in oil tanker ships, almost all the respondents (100%) have revealed that they wear Boiler suits /Overalls during their work besides wearing trousers with shirt and aprons/overcoats occasionally. With regard to the wearing hours of the Workwear, 50% of the respondents are wearing the Workwear for 7-9 hours per day and minimum of 12% respondents wear for 1-3 hours (Figures 1- 2).

Regarding the frequency of laundering the Workwear, 55% of the respondents are laundering the Work wear daily and only 8% launder them thrice or once in a week .When durability of the Workwear is taken into account, most of the respondents (66%) opined that the durability is upto 3 months whereas 13.0 per cent expressed that they use Workwear for above 5 months. Majority of the respondents (67%) have stated that the existing Workwear is heavy weight and only 5.0% of the respondents consider the Workwear as light weight. Further 77.0% of the respondents desired to have light weight Workwear which would be comfortable for wearing and minimum percent of the respondents (23.0%) prefer medium weight Workwear (Figures 3 – 6).

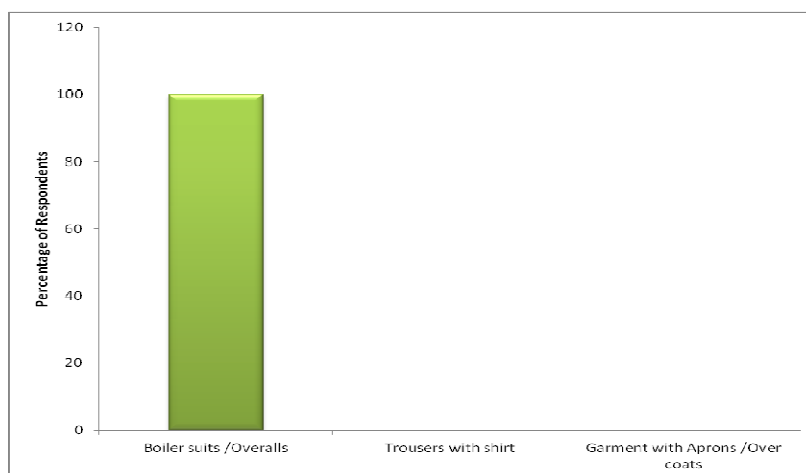


Figure 1: Type of Workwear

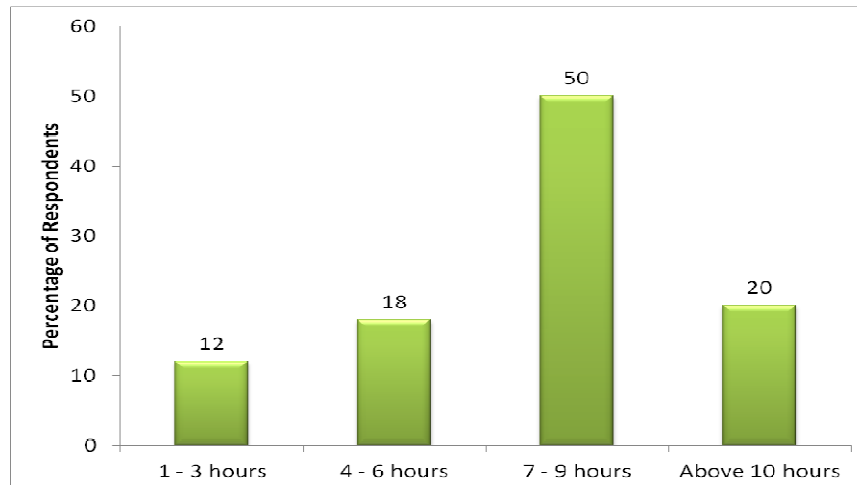


Figure 2: Wearing Hours of Workwear

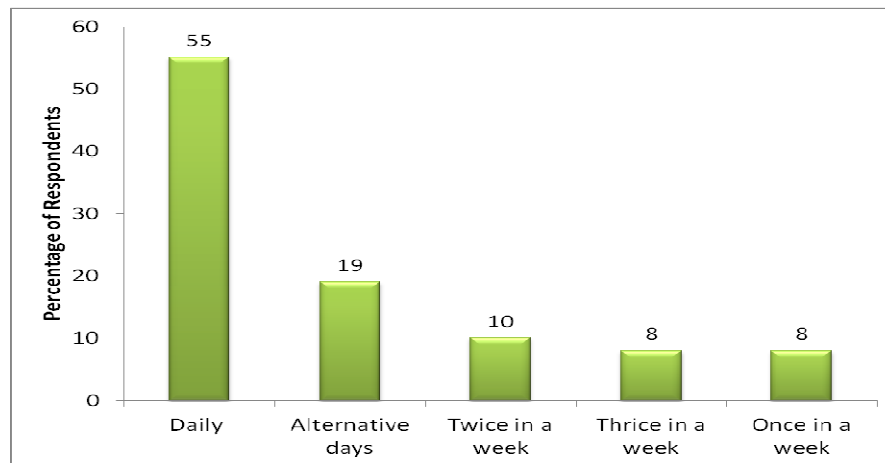


Figure 3: Frequency of Laundering Workwear

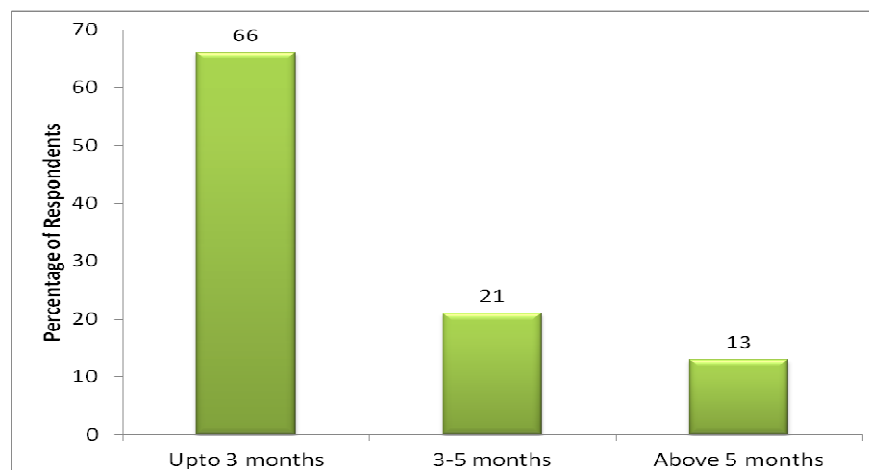


Figure 4: Durability of the Workwear

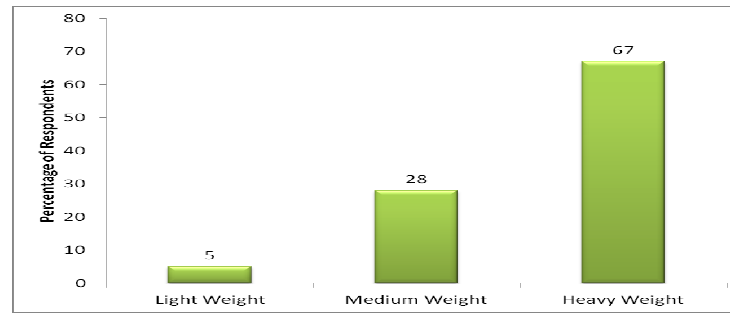


Figure 5: Weight of the Existing Workwear

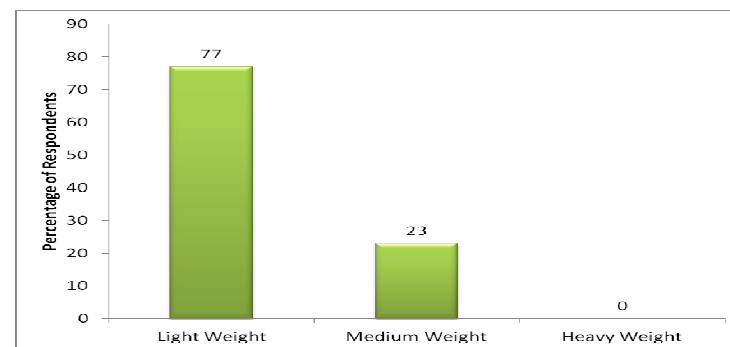


Figure 6: Preference for Weight of the Workwear

Problems Faced by the Respondents While /after Laundering the Workwear - Henry Garrett Ranking Technique

Problems faced by the respondents while laundering the Workwear are discussed in the following Table - 1 using Henry Garrett Ranking Technique in different dimensions viz., overall common problems, daily, alternative days, twice in a week, thrice in a week and once in a week. Also priority of the problems faced such as difficulty in removing grease and oil stains/spills, removal of creases, fading of colours, shrinkage, problems in removing oil/grease odours, prevalence of perspiration / sweat stains and strain in handling the Workwear are also ranked.

Table 1: Problems Faced by the Respondents While / after Laundering the Workwear

S. No	Problems	Common Problems		Daily		Alternate Days		Twice in a Week		Thrice in a Week		Once in a Week	
		Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank
1	Difficulty in removing grease and oil stains/spills	62.2	I	61.5	I	55.0	II	71.2	I	72.4	I	63.0	II
2	Removal of creases	47.1	V	46.8	V	50.4	IV	41.9	VI	47.3	IV	47.3	IV
3	Fading of colours	48.8	IV	50.6	IV	48.7	V	46.2	IV	43.9	V	44.9	V
4	Shrinkage	55.5	II	59.2	II	53.9	III	54.3	II	50.9	III	39.4	VII
5	Problems in removing oil/ grease odours	53.4	III	50.8	III	58.7	I	50.7	III	51.1	II	64.3	I
6	Prevalence of perspiration / sweat stains	43.0	VI	43.3	VI	42.3	VI	45.7	V	41.5	VI	41.0	VI
7	Strain in handling the Workwear	38.4	VII	36.1	VII	39.9	VII	39.0	VII	38.3	VII	49.3	III

It is inferred from the above Table-1 that the common problem mentioned by the respondents is 'difficulty in removing grease and oil stains / spills' and the least problem as 'strain in handling the Workwear' while / after laundering the Workwear. In the case of daily care, the major difficulty faced by the respondents is 'difficulty in removing grease and oil stains / spills' and the minor difficulty faced is 'strain in handling the Workwear'. While analysing with alternative days, the respondents faced the most important problem as 'removing oil/grease odours' and the least problem as 'strain in handling the Workwear'. It was also observed that besides the major problem of 'difficulty in removing grease and oil stains/spills', the problem of 'shrinkage' ranked next followed by 'problems in removing oil/grease odours', 'fading of colours', 'removal of creases' and 'prevalence of perspiration/sweat stains with slight changes in the ranking order in almost all the cases except in the case of once in a week laundering.

Considering the respondents who launder the Workwear twice in a week, the highest rank is given to the problem 'difficulty in removing grease and oil stains / spills' and the lowest rank to 'strain in handling the Workwear. In the view of problems in thrice in a week laundering the Workwear, most of the respondents are facing the main problem as 'difficulty in removing grease and oil stains / spills' and the least problem as 'strain in handling the Workwear'. In the case of once in a week, the major problem faced by the respondents is 'removing oil / grease odours' and the least problem as 'shrinkage'.

CONCLUSIONS

This study was conducted in order to identify the perception of Marine Engineers working in oil tanker ships towards their Workwear. The findings that have been explored from the present study could be taken as suggestion for enhancing the functional aspects of the Workwear. Though fabrics with certain properties are available in the market, materials with expected multi-functional aspects to satisfy the wearer can be produced and marketed to improve the versatility of the Workwear.

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